SECRET

25X1

ILLEGIB

SDN No. RD9-1118/23
Page 3 of 6
Copy 4 of 11

Ferranti reader parts were shipped to Washington for installation. Replacements for them have been ordered. One exciter autotune motor assembly was shipped to Washington for installation and a replacement has been ordered.

One Model 1500 power supply meter was ordered and when received, will be shipped to Washington for installation.

TASK 8. AS-6 DATA TELEMETERING SYSTEM

Field Unit: The service test model of the digital converter has been constructed and completely tested. The unit operated satisfactorily over the temperature range of -50 to +50°C.

The service test models of the power amplifier and exciter have been assembled and tested in the laboratory. No serious problems have been encountered in either unit and both may be considered complete except for the installation of temperature compensated crystals in the exciter, and the mounting of supporting brackets and covers to both units.

Due to the late delivery of the high frequency oscillator crystals, complete compensation over the entire operating range of -50 to +50°C may not be possible in the service test model; however, preliminary measurements indicate that they are capable of correction over the range of from -50 to +50°C. No difficulty is anticipated in providing adequate compensation to hold the operating frequency within allowable tolerances over the range of -20 to +50°C which should be more than adequate for the forthcoming tests.

It cannot be overemphasized how important it is to have the exact frequencies for the next unit as soon as possible, so that adequate time is available for complete compensation.

The sub-contracted portions of the stepping oscillator have not been delivered to date. [redacted] has repeatedly failed 25X1
to meet quoted delivery dates. Development of the stepping oscillators has been started in the laboratory and indications are that a suitable device can be 25X1
constructed for the service test model.

25X1

All three long-term programmers have been delivered by [redacted] and the programming punching equipment is in transit by truck.

DOC 81 REV DATE 1 APR 1980 BY 064540
ORIG COMP 056 OPI 56 TYPE 30
ORIG CLASS S PAGES 2 REV CLASS S
JUST 22 NEXT REV 2010 AUTH: HR 10-2

SECRET

25X1

Successful temperature runs have been run on the r-f power amplifier. Matching networks have been devised which convert a 50 ohm power type load to values required for simulating the antennas on the operating frequencies.

The analysis of the [redacted] propagation tests revealed that the twelve-foot vertical antenna was superior to the several other antennae at most frequencies. The whip, however, does have a higher Q than the horizontal antennae at the lower frequencies, and consequently represents a potential source of difficulty to achieve efficiency and matching with variations in environment. 25X1

The first final model of the receiver is about 98% complete. The only remaining work is to complete the RF assembly. Three [redacted] RF Converters have been received. The remaining seven are due to be shipped on April 7. This receiver, using engineering models of the [redacted] Converter, has been tested with the breadboard unit of the transmit terminal and operation was satisfactory. 25X1 25X1

Receive Terminal: Fabrication of all chassis and cabinets have been completed, except for minor modifications on the receive unit assemblies. All chassis have been checked out except two receive chassis and the RF simulator.

Transmit Terminal: Fabrication of this terminal is complete and all circuits have been checked out. The major task remaining is to check interoperation with the [redacted] 231-D-20 transmitter. 25X1

A proposal is being submitted for a supplement to the present Task Order to cover Contractor's participation in a field testing and evaluation program.

TASK 9. LINEAR EXCITER FOR THE AS-4A

This program has been delayed indefinitely pending decisions on the future course of the AS-4B program. This action has been concurred in by the cognizant Government engineers.

TASK 10. FABRICATION OF RS-16B

Machining of the case castings is under way with delivery of the finished parts scheduled for the middle of April. The prototype top plate has been completely wired and tested, with only the engineering of the control panel remaining to be accomplished.